



Report on the use of the insemination catheter “SafeBlue”

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Already in 2002 Minitube developed a new inseminating concept aimed to massively improve hygiene under normal production circumstances. The objective of this concept was, by applying simple but effective procedures, to avoid the spread of environmental and fecal germs from the outer genital area into the cervix when inserting the head of a catheter.

To achieve this objective the very successful and widely used FoamTip® catheter was adapted. Each catheter was individually wrapped in a special plastic sheath. Before sealing the catheter into the sheath it is coated with a thin layer of lubricant as this is no longer possible just before insemination without losing the benefits of the new system. After this has been done the sealed catheter is sterilized by means of gamma radiation, thus achieving a germ free product. Additionally this sheath protects the catheter from soiling by dust etc. when working in stables.



Working with this catheter becomes very easy with a little practice. As usual the outer genital area should be cleaned with a paper towel. Then the catheter, still packed in its sheath, is inserted into the vagina by 5 – 8 cm. With the left hand (right handed people) the sheath then is held back, while the catheter is pushed on with the right hand and breaks through the plastic sheath along the perforation at the top of the sheath. By doing so deep inside the vagina there is only a very little germ presence and therefore hardly any contamination to the catheter head. After rupturing the sheath the catheter can be pushed further into the cervix as usual. After the catheter is in the cervix the sheath can be removed or it can be left in place until insemination has been performed. In the latter case the plastic sheath gets punctured by the top of the tube with semen. From this point onwards insemination takes place as normal.

Below you can see the results from a sow farm in Brandenburg Germany, which has been involved in an experiment using this concept since mid 2003. This farm with 530 sows works in a 14 day cycle with 21 days suckling time. Therefore in every week in which inseminations take place 40 sows need to be treated. The farm works with 100% AI as well as belt insemination. Two insemination technicians conduct all inseminations. For the experiment all sows were randomly divided into two groups and kept in the mating area. For the control group (standard catheter) 18 animals from each group were inseminated. The evaluation took place with the software ‘Supersow’ ; Individual analysis of results was not done.

During the previous year the farm achieved a pregnancy rate (PR) of 77.8% with 11.8 born piglets per litter and 10.3 live ones per litter. Based on these results, an increase in pregnancy rate was to be expected. In the first 3 weeks of AI during the experiment insemination was only performed with SafeBlue, after which a control group was formed to verify the reproductive advantage of the SafeBlue group.



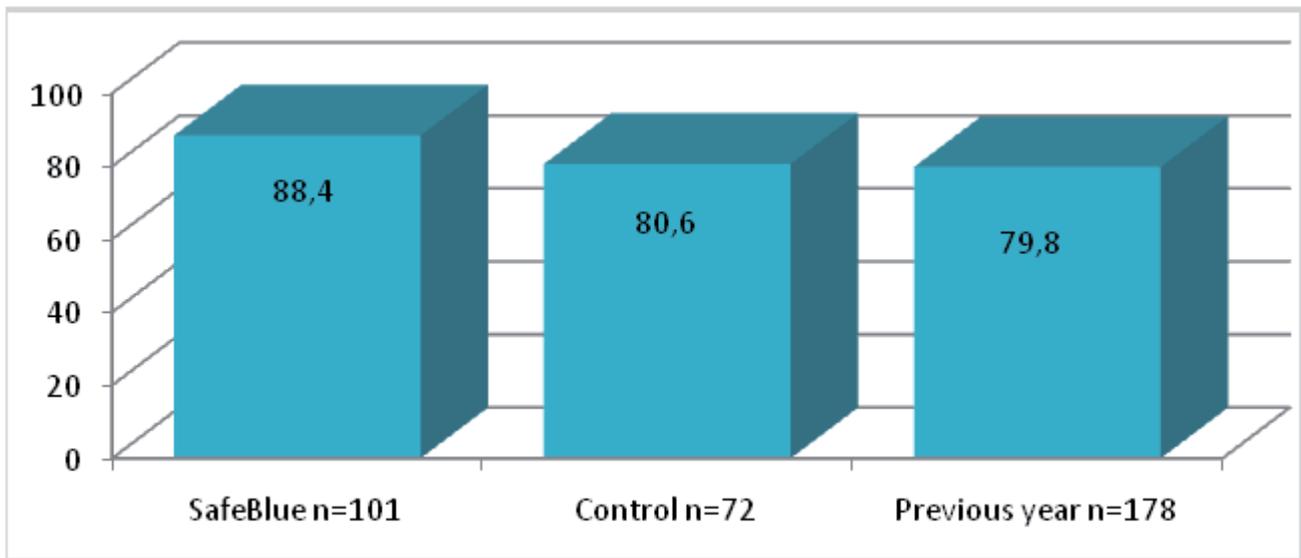
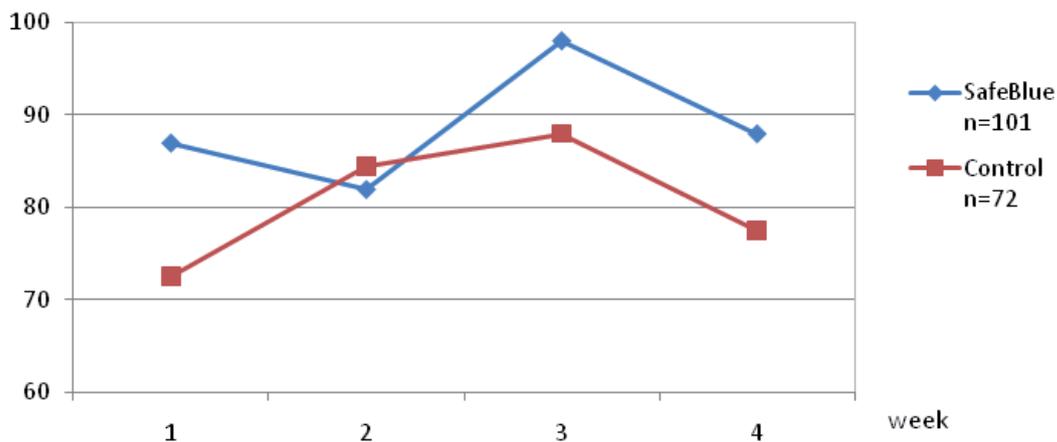


Figure 1: Comparison PR in trial period + comparison previous year period

During the first three weeks of inseminations where all were done with the SafeBlue option the PR rapidly increased to 88.8%. Since no control group was available and the initial trial could have had a relative trial advantage, the results of this initial period have only been partially included in the overall results. During the next few weeks the new catheter became more of a routine and more constant results could be observed.



During the whole of the trial period (7 weeks of insemination), compared to the previous year a 5.5% higher PR was achieved. If the results are compared with the previous weeks the outcome was even higher (8%). Significant is however the direct comparison with the control group as shown in Figure 1. It clearly shows the better results compared with the control group with a 7.8% higher PR. It also shows the consistency of the better results throughout the trial period, the maximal difference reaching 19.6%. The same type of results showed when the insemination technicians worked on rotating shifts between trial- and control group.

As a result of this trial the already positive comments on the SafeBlue catheter can now be supported by actual results in the field.

As it is we already were convinced of the advantages of this system and we have now consequently included this product in our offerings. After close examination we are now certain, that the extra cost for this type of product is quickly recouped given the expectation of higher yields in sow farms which use this product in their strive towards advances in insemination hygiene.